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REMARKS

This Application has been carefully reviewed in light of the Office Action mailed July 25, 2006 (the "Office Action"). In the Office Action, Claims 1-4, 6-10, 12, and 14-22 are pending and rejected. In order to advance prosecution of this case, Applicant amends Claim 6. Applicant respectfully requests reconsideration and favorable action in this case.

Claim Objections

The Examiner rejects Claim 6 due to informalities. Applicant has amended Claim 6 to correct the informalities identified by the Examiner. Specifically, Applicant has amended Claim 6 to depend from Claim 1. Applicant respectfully requests that the objection to Claim 6 be withdrawn.

Section 103 Rejections

The Office Action rejects Claims 1-4, 6-10, and 13-22 under 35 U.S.C. §103(a) as being unpatentable over various combinations of U.S. Patent No. 6,728,217 issued to Amirijoo et al. ("*Amirijoo*") and U.S. Patent No. 6,704,328 issued to Khaleghi et al. ("*Khaleghi*") with U.S. Patent No. 6,360,077 issued to Mizoguchi ("*Mizoguchi*"), U.S. Patent No. 5,859,843 issued to Honkasalo et al. ("*Honkasalo*"), U.S. Patent No. 7,042,963 issued to Raith et al. ("*Raith*"), U.S. Patent No. 6,526,030 issued to Rezaiifar et al. ("*Rezaiifar*"), U.S. Patent No. 6,563,881 issued to Sakoda et al. ("*Sakoda*"). For the reasons discussed below, Applicant respectfully traverses the rejections of Claims 1-4, 6-10, and 13-22.

A. The Claims are Allowable over the Cited References

First, Applicant respectfully submits that the proposed combinations does not disclose, teach, or suggest each and every element recited in Applicant's claims. For example, independent Claim 10 of the present Application recites:

An air interface comprising:
at least one logical communication channel configured to communicate a signal; and
a control channel forming a communication interface between a communication device and a base station, the control channel operable to select and assign a data rate to each of the at least one logical communication channel, the control channel being

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configured to change the data rate assigned to each of the at least one logical communication channel based upon signal quality information about data communicated with the signal.

The M.P.E.P. provides that "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art." M.P.E.P. § 2143.03 (citing *In re Wilson*, 424 F.2d 1382, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970)). Because neither *Amirijoo* nor *Khaleghi* disclose, teach, or suggest each and every element recited in Applicant's Claim 10, Applicant respectfully submits that the combination of features and operations recited in Applicant's Claim 10 is not disclosed, taught, or suggested by the proposed *Amirijoo-Khaleghi* combination.

For example, Applicant respectfully submits that the proposed *Amirijoo-Khaleghi* combination, as relied upon by the Examiner, does not disclose, teach, or suggest "a control channel forming a communication interface between a communication device and a base station, the control channel operable to select and assign a data rate to each of the at least one logical communication channel," as recited in Applicant's Claim 10. In the Office Action, the Examiner acknowledges that the recited claim language is not disclosed in *Amirijoo*. Rather, the Examiner relies upon *Khaleghi* for disclosure of Applicant's "control channel forming a communication interface between a communication device and a base station, the control channel operable to select and assign a data rate to each of the at least one logical communication channel." (Office Action, page 3). Although the portions of *Khaleghi* cited by the Examiner disclose that "a controller provides a rate controllable signal with reference to the parameters of the control message" (Abstract), such a controller is a component of the either the base station or the mobile station of the *Khaleghi* system.

Specifically, *Khaleghi* discloses that "a signal transmission system [includes] a transmitter 210 and a receiver 220." (Column 5, lines 18-19; FIGURE 2). "In the forward-link scenario, as shown in FIG. 1A, the transmitter 210 is part of the base station 110 and the receiver 220 is part of the mobile station 112." (Column 5, lines 19-22). Conversely, "[i]n the reverse-link scenario as shown in FIG. 1B, the transmitter 210 is part of the mobile station 120 and the receiver 220 is part of the base station 122." (Column 5, lines 22-24). "In the reverse-link scenario as shown in FIG. 1C, the transmitter of the mobile station 130 is

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different from one shown in FIG. 2, because the control signal source 134 is included in the receiver." (Column 5, lines 24-28). Thus, *Khaleghi* discloses that the controller is either a component of the transmitter (in the forward-link scenario of FIG. 1A and the reverse-link scenario of FIG. 1B) or the receiver (in the reverse-link scenario of FIG. 1C). *Khaleghi* does not disclose, teach, or suggest, however, "a control channel forming a communication interface between a communication device and a base station, the control channel operable to select and assign a data rate to each of the at least one logical communication channel," as recited in Applicant's Claim 10.

For at least these reasons, Applicant respectfully requests reconsideration and allowance of Claim 10, together with Claims 12 and 14-16 that depend on Claim 10.

The Examiner also relies upon the proposed *Amirijoo-Khaleghi-Mizoguchi* combination and the proposed *Amirijoo-Khaleghi* combination to reject independent Claims 1 and 17, respectively. However, independent Claims 1 and 17 includes certain features and operations that are analogous to the features and operations recited in Claim 10. For example, Claim 1 recites "providing a control channel as a communication interface between a communication device and a base station, the control channel operable to select and assign a data rate to each of the plurality of logical channels, the control channel including interfered carrier information." As another example, Claim 17 recites "an air interface of wireless communications between the communication device and the base station, the air interface including a control channel and a plurality of logical communication channels, the control channel operable to select and assign a data rate to each of the plurality of logical communication channels on a per channel basis based upon signal quality information about data communicated with the signal." Accordingly, for reasons analogous to those discussed above with regard to Claim 10, Applicant submits that the proposed *Amirijoo-Khaleghi-Mizoguchi* combination and the proposed *Amirijoo-Khaleghi* combination does not disclose, teach, or suggest the features of independent Claims 1 and 17, respectively.

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For at least these reasons, Applicant respectfully requests reconsideration and allowance of Claims 1 and 17, together with Claims 2-4 and 6-9 that depend on Claim 1 and Claims 18-22 that depend on Claim 17.

B. The Proposed Combinations of References are Improper

Second, Applicant submits that the Examiner has not demonstrated the requisite teaching, suggestion, or motivation in *Amirijoo*, *Khaleghi*, *Mizoguchi*, or the knowledge generally available to those of ordinary skill in the art at the time of the invention to modify or combine *Amirijoo*, *Khaleghi*, and *Mizoguchi* in the manner the Examiner proposes. The rejections are improper and should be reversed for at least this additional reason.

The question raised under 35 U.S.C. § 103 is whether the prior art taken as a whole would suggest the claimed invention taken as a whole to one of ordinary skill in the art at the time of the invention. Accordingly, even if all elements of a claim are disclosed in various prior art references, which is certainly not the case here as discussed above, the claimed invention taken as a whole cannot be said to be obvious without some reason given in the prior art why one of ordinary skill at the time of the invention would have been prompted to modify the teachings of a reference or combine the teachings of multiple references to arrive at the claimed invention.

The governing Federal Circuit case law makes this strict legal standard clear.¹ According to the Federal Circuit, "a showing of a suggestion, teaching, or motivation to combine or modify prior art references is an essential component of an obviousness holding." *In re Sang-Su Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430, 1433 (Fed. Cir. 2002) (quoting *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 U.S.P.Q.2d 1456, 1459 (Fed. Cir. 2000)). "Evidence of a suggestion, teaching, or motivation . . . may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, the nature of the problem to be solved." *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). However, the "range of sources

¹ Note M.P.E.P. 2145 X.C. ("The Federal Circuit has produced a number of decisions overturning obviousness rejections due to a lack of suggestion in the prior art of the desirability of combining references.").

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available . . . does not diminish the requirement for actual evidence." *Id.* *Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so."* *In re Mills*, 916 F.2d at 682, 16 U.S.P.Q.2d at 1432 (emphasis added). *See also In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-58 (Fed. Cir. 1998) (*holding a prima facie case of obviousness not made where the combination of the references taught every element of the claimed invention but did not provide a motivation to combine*); *In Re Jones*, 958 F.2d 347, 351, 21 U.S.P.Q.2d 1941, 1944 (Fed. Cir. 1992) ("Conspicuously missing from this record is any evidence, other than the PTO's speculation (if that can be called evidence) that one of ordinary skill in the herbicidal art would have been motivated to make the modification of the prior art salts necessary to arrive at" the claimed invention.). Even a determination that it would have been obvious to one of ordinary skill in the art at the time of the invention to try the proposed modification or combination is not sufficient to establish a *prima facie* case of obviousness. *See In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1599 (Fed. Cir. 1988).

In addition, the M.P.E.P. and the Federal Circuit repeatedly warn against using an applicant's disclosure as a blueprint to reconstruct the claimed invention. For example, the M.P.E.P. states, "*The tendency to resort to 'hindsight' based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.*" M.P.E.P. § 2142 (emphasis added). The governing Federal Circuit cases are equally clear. "A critical step in analyzing the patentability of claims pursuant to [35 U.S.C. § 103] is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. . . . Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one 'to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher.'" *In re Kotzab*, 217 F.3d 1365, 1369, 55 U.S.P.Q.2d 1313, 1316 (Fed. Cir. 2000) (citations omitted; emphasis added). In *In re Kotzab*, the court noted that to prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. *See id.* *See*

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also, e.g., *Grain Processing Corp. v. American Maize-Products*, 840 F.2d 902, 907, 5 U.S.P.Q.2d 1788, 1792 (Fed. Cir. 1988). Similarly, in *In re Dembiczak*, the Federal Circuit reversed a finding of obviousness by the Board, *explaining that the required evidence of such a teaching, suggestion, or motivation is essential to avoid impermissible hindsight reconstruction of an applicant's invention*:

Our case law makes clear that the best defense against the subtle but powerful attraction of hind-sight obviousness analysis is *rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references*. Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability—the essence of hindsight.

175 F.3d at 999, 50 U.S.P.Q.2d at 1617 (emphasis added) (citations omitted; emphasis added).

According to the Examiner, "it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teachings of *Amirijoo* with that of *Khaleghi* for the advantage of smoothly transmitting bursty data in a wireless communications system using a corresponding signaling technique/method." (Office Action, page 9, citing Column 1, lines 8-11 of *Khaleghi*). Although the statement is made with respect to independent Claim 10 it is applied to independent Claims 1 and 17 since they are rejected under the same ground and motivation. Thus, with respect to the independent claims, the Examiner has merely provided a conclusory statement identifying an advantage that is allegedly provided by the teachings of *Khaleghi* (and Applicant does not admit that *Khaleghi* discloses such an advantage).² In other words, the Examiner has not provided an

² The Examiner provides similar conclusory states in support of the proposed *Rezaiifar-Amirijoo-Sayers* combination with respect to Claims 4, 8, 19, 21, and 22. For example, the Examiner states with regard to Claims 4 and 19 that "it would have been obvious to one [of] ordinary skill in the art at the time the invention was made to modify the *Rezaiifar et al.* with the teaching of the *Sayers et al.* of control channel with operates at a low data rate in order to utilize most of the channels capacity for physical traffic channels." (Office Action, page 8). With regard to Claims 8 and 21, the Examiner states that "it would have been obvious to one [of] ordinary skill in the art at the time the invention was made to modify the *Rezaiifar et al.* with the teaching of the *Sayers et al.* of logical channel of data rate in order to provide the mobile terminal with the data rate requesting." (Office Action, pages 8-9). With regard to Claim 22, the Examiner states that "it would have been obvious to one skilled in the art at the time the invention was made to modify the above references with the teaching of *Fazel* in order to provide customer the choice of wireless device for transmitting and receiving variable data rate." (Office Action, page 9).

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explanation as to: (1) why it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention (*without using Applicant's claims as a guide*) to modify the system for modifying data rates disclosed in *Amirijoo* to include rate controller of *Khaleghi*; (2) how one of ordinary skill in the art at the time of Applicant's invention would have actually and successfully done so; and (3) how doing so would purportedly meet the limitations of Applicant's claims. Thus, there is no "factual inquiry" in this reasoning, and this reasoning surely cannot be said to be "thorough and searching." Indeed, if it were sufficient for Examiners to merely point to a purported advantage of one reference and conclude that it would have been obvious to combine or modify that reference with other references simply based on that advantage (which, as should be evident from the case law discussed above, it certainly is not), then virtually any two or more references would be combinable just based on the fact the one reference states an advantage of its system. Of course, as the Federal Circuit has made clear and as discussed above, that is not the law. According, Applicant respectfully submits that the proposed *Amirijoo-Khaleghi* and *Amirijoo-Khaleghi-Mizoguchi* combinations are improper with respect to Applicant's Claims 1-4, 6-10, 12, and 14-22.

For at least these reasons, Applicant respectfully requests reconsideration and allowance of Claims 1-4, 6-10, 12, and 14-22.

Again, the Examiner identifies alleged advantages of *Sayers* and *Fazel*, respectively, but does not provide explanation as to (1) why it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention (*without using Applicant's claims as a guide*) to modify the channel structure disclosed in *Rezaifar* to include the particular techniques disclosed in *Sayers* and *Fazel*; (2) how one of ordinary skill in the art at the time of Applicant's invention would have actually and successfully done so; and (3) how doing so would purportedly meet the limitations of Claims 4, 8, 19, 21, and 22.

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CONCLUSION

Applicant has made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for other apparent reasons, Applicant respectfully requests full allowance of all pending Claims. If the Examiner feels that a telephone conference or an interview would advance prosecution of this Application in any manner, the undersigned attorney for Applicant stands ready to conduct such a conference at the convenience of the Examiner.

Applicant believes no fees are currently due. However, should there be a fee discrepancy, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 19-2179.

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